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Application No. 10/672,937
Amendment and Reply to Office Action Dated May 2, 2007

REMARKS

Continued examination and favorable reconsideration are respectfully requested.

Claims 1-18 and 43 are pending in this application. Claims 19-42 and 44 were previously withdrawn from consideration. By this Amendment, claims 1, 2, 4, 5, 7, 8, 10-12, and 43 have been amended. Entry of this amendment, reconsideration, and prompt favorable action are respectfully requested.

Rejection of the Claims under 35 U.S.C. § 101

At page 2 of the Office Action, claims 1-18 and 43 are rejected under 35 U.S.C. § 101 on grounds that the claimed invention is directed to non-statutory matter. The Office Action indicates that at least one embodiment of the claimed invention is drawn to a computer process comprising sequence information, evaluating the sequence information to identify ambiguous bases present within the sample sequence information by applying a rule based criteria, and evaluating the quality and coverage of the sample sequence information. The Office Action asserts that claims 1-18 and 43 fail to produce a "useful, concrete, and tangible result." Applicants respectfully traverse this rejection and the suggestion that claims 1-18 and 43 fail to recite statutory subject matter.

Claim 1 recites an automated method for sequence evaluation, including, for instance, features of "identify[ing] reportable ranges and sequence variants for [the] sample sequence information," features which clearly operate on quantities that are directly related to tangible sequences. Claim 43 recites generally similar features, which establish the useful and tangible activity of applicants' claimed invention. To satisfy the Examiner's concerns and advance

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prosecution of the application, however, applicants have amended claims 1 and 43 to incorporate a step of "outputting at least the reportable ranges and sequence variants to a file." The rejection of claims 1-18 and 43 under §101 is overcome. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection of the Claims under 35 U.S.C. § 112

At page 3 and 4 of the Office Action, claims 1-18 and 43 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action, at page 4, indicates that the term "reportable ranges" for the sample sequence in claims 1 and 43 is unclear. This rejection is respectfully traversed. Applicants respectfully submit that the term "reportable ranges" is adequately clear in the claims in light of applicants' teaching in the specification, to mean a range whose quality is sufficient to be reported for further analysis. To satisfy the Examiner's concerns and advance prosecution, however, applicants have amended claims 1 and 43 to refer to the reportable ranges as base sequence ranges "having an associated quality value exceeding a confidence threshold." Discussion of such features can be found, for instance, in the applicants' specification at page 14, paragraph [0046], page 23, paragraph [0078], and page 26, paragraph [0090]. The rejection based on the term "reportable ranges" is overcome, and should be withdrawn. Reconsideration is respectfully requested.

The Office Action indicated, at page 4, rejected claims 1-18 and 43 due to the term "usable." This rejection is respectfully traversed. Applicants respectfully submit that the meaning of the phrase "usable for comparison matching" is adequately clear in the claims, as referring to

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base sequence ranges whose quality permits them to be used for comparison matching. The amendments applicants have made to refer to the associated "quality value" as noted above, has made the meaning of this phrase even more clear. The rejection based on the term "usable" for comparison matching is overcome, and should likewise be withdrawn. Reconsideration is respectfully requested.

The Office Action, at page 5, rejects claims 2, 5, 8, and 11, due to the term "major and minor bases." The Examiner continues to assert that those terms could ambiguously imply the major or minor groove of the DNA helix. This rejection is respectfully traversed. Applicants respectfully point out that the claims do not refer to the structural grooves of DNA, nor to other speculative meanings other than the clear meaning of bases associated with major or minor peaks of an electropherogram. While the Examiner asserts that the terms "major and minor bases" do not appear in the specification, claims 2, 5, 8, and 11, as originally filed contain that term, and form part of applicants' original specification. To satisfy the Examiner's concerns regarding the connotation of that term and advance prosecution, however, applicants have amended claims 2, 5, 8, and 11 to refer to "major and minor peaks," rather than bases. The rejection based on the term "major and minor bases" is overcome and should be withdrawn. Reconsideration is respectfully requested.

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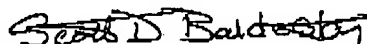
CONCLUSION

In view of the foregoing remarks, applicants respectfully request favorable reconsideration of the present application and a timely allowance of the pending claims.

Should the Examiner deem that any further action by applicants or applicants' undersigned representative is desirable and/or necessary, the Examiner is invited to telephone the undersigned at the number set forth below.

If there are any other fees due in connection with the filing of this response, please charge the fees to deposit Account No. 50-0925. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,



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